

Acupuncture treatment in Bradycardia

Jihe Zhu^{1,2}, Blagica Arsovska¹, Kristina Kozovska¹, Julijana Velkovska¹

Gjurgjica Najdovski¹

1 Center of Traditional Chinese Medicine "Tong Da Tang", Republic of N. Macedonia;

2 University of "Skopje", Republic of N. Macedonia

DOI: <https://www.doi.org/10.59710/oaijoaru231309z>

Abstract

Bradycardia is a slow heart rate, meaning under 60 beats per minute. Generally, it is normal to have a slower heart rate when you're resting and sleeping, and in some people, particularly healthy young adults and trained athletes. A slow heart rate is frequent under several circumstances and does not require treatment unless it causes symptoms. Bradycardia belongs to the category of "palpitation" in Traditional Chinese Medicine (TCM). Two aspects of the pathogenesis of palpitation are deficiency and excess. Benefiting qi, nourishing yin and activating blood circulation are the general principles in treatment. In this article is presented a case of 48 years old man with bradycardia and with symptoms of chest pain and fatigue. Before coming to the TCM center and generalizing acupuncture therapies, his heart rate was 48 bpm, saturation 94% and blood pressure 150/90. After 3 acupuncture treatments, his heart rate has normalized and is 76-77 bpm. The patient has a previous history of hypothyroidism, but for the last 4 years, the hormones have been within reference values and he does not take medication at all. He is not an athlete and is not physically active. Acupuncture, as a part of TCM, is an effective treatment and gives very satisfying results in these kinds of conditions.

Key words: bradycardia, acupuncture, TCM, treatment

Introduction

A slow heart rate, under 60 beats per minute, is known as bradycardia. It signifies a reduced cardiac activity, where your heart beats fewer times in one minute. Such a slow heart rate may result in insufficient oxygen-rich blood reaching your body's organs and tissues. This, in turn, can impair your body's ability to perform its regular processes and functions effectively. [1]

For many people, bradycardia doesn't cause any symptoms. This is generally accurate for people who are very physically active. When bradycardia happens for people whose hearts can't or don't compensate, the following symptoms may develop: shortness of breath, chest pain, dizziness and lightheadedness, fatigue, confusion, difficulty concentrating etc. These symptoms happen because of how bradycardia affects heart and brain. [2]

Diagnosing bradycardia is a bit difficult for doctors, because it is not always present. The doctor will initially ask for family and patient history, a physical exam and will make a test called an electrocardiogram, often called an EKG, to measure your heart's electrical system. ECG monitoring can be considered to make a symptom-rhythm correlation, with longer term monitoring resulting in higher yield. In selected patients based on clinical suspicion and differential diagnosis, doctors will recommend more advanced disease-specific imaging modalities, such as cardiac magnetic resonance imaging (MRI), cardiac computed tomography (CT) or echocardiography. [3]

The treatment plan will depend on the potential cause of the problem. In cases where medication slows the heartbeat and causes bradycardia, the doctor may consider changing the medication. If bradycardia is caused by an electrolyte imbalance due to low or high potassium levels, it may be necessary to correct the imbalance. In some instances, a pacemaker may need to be implanted to regulate the heart's rhythm. Pacemakers are permanently attached to the heart and implanted under the skin. When they detect a slow or abnormal heart rhythm, they emit impulses that correct the heart rate. [4]

Case report

The treated patient is a 48 years old man with bradycardia and with symptoms of chest pain and fatigue. The patient has a previous history of hypothyroidism, but for the last 4 years, the hormones have been within reference values and he does not take medication at all. He is not an athlete and is not physically active. Before coming to the TCM center and generalizing acupuncture therapies, his heart rate was 48 bpm, saturation 94% and blood pressure 150/90. For this problem he made totally three acupuncture treatments once weekly. After the first treatment the pulse increased to 59 bpm and saturation 97% and blood pressure 130/80. After the second treatment, after an hour and a half car ride at an altitude of 600 m, his heart rate was 72 bpm and the saturation 98%. After third treatment, the patient had little physical activity and walking at an altitude of 1400 m, his heart rate was 76-77 beats per minute, which is an excellent result.

The acupuncture treatments were made in an acupuncture clinic for acupuncture and TCM in Skopje, North Macedonia by a doctor specialist in acupuncture. Acupuncture treatments were with a duration of 30 to 45 minutes. Treatments were done indoors, on a room temperature, with normal (dry) acupuncture with fine sterile disposable needles sized 0.25x25mm. Acupuncture points used in the treatments are: Du20, Li4, Pc6, St36, Lr3.

TCM is an ancient system of health and wellness that's been used in China for 2.500 of years. TCM is based on balance, energy and harmony. There are two main components of TCM like: Qi energy or also called vital energy and, Ying and Yang which are opposites that describe the qualities of qi. Yin (passive) represents darkness, night, cold, feminine, negative. Yang (active) represents day, light, warm, male, positive. The body's qi (life force), flows through invisible meridians (channels) of the body which connects tissues, organs, nerves, veins, cells, atoms, and consciousness itself. There are 12 crucial meridians, each of which connects to one of the 12 major organs in TCM theory. Traditional Chinese Medicine include: acupuncture and acupressure, moxibustion, herbal medicine, nutrition, Chinese massage like tui na, and exercise such as tai chi and qi gong. In acupuncture, thin metal needles are inserted into specific points along the meridians.

The needles stimulate the meridians and readjust the qi flow in order to balance the body's yin and yang. Bradycardia belong to the category of "palpitation" in TCM. Two aspects of the pathogenesis of palpitation are deficiency and excess. Benefiting qi, nourishing yin, and activating blood circulation are the general principles in treatment. Excess includes all pathogenic factors disturbing the heart. Deficiency includes deficiency of qi, blood, yin, and yang leading to losing of nourishment to the heart. According to the basic theory of TCM, the liver stores blood and the heart governs the blood circulation. When people lie down, the blood returns to the liver, when the people stayed up for a long time, liver could not get enough rests, which caused insufficient blood supply. Qi energy is the mother of blood in TCM. Both deficiencies of qi and blood lasting for a long time can result in the heart limitation to support the blood circulation. Therefore, the treatment is based on the principle to benefit the qi and nourish the yin and activate blood circulation. [5, 6, 7]

Conclusion

Acupuncture as a part of Traditional Chinese Medicine (TCM) is very effective method in treating bradycardia, gives positive results and successfully is improving the health.

References

- [1] Medically reviewed by Dr. Payal Kohli, M.D., FACC — By JC Jones and Jill Seladi-Schulman, Ph.D. January 18, 2022 [<https://www.healthline.com/health/slow-heart-rate>]
- [2] Medically Reviewed by James Beckerman, MD, Written by Heidi Godman, FACC on August 17, 2022. [<https://www.webmd.com/heart-disease/atrial-fibrillation/bradycardia>]
- [3] Sunjeet Sidhu, Joseph E. Marine, Evaluating and managing bradycardia, Trends in Cardiovascular Medicine, Volume 30, Issue 5, 2020, Pages 265-272, ISSN 1050-1738, [<https://doi.org/10.1016/j.tcm.2019.07.001>.]
- [4] Mandal, Ananya. "Bradycardia Treatment". *News-Medical*. 15 September 2023. [<https://www.news-medical.net>]
- [5] Medically Reviewed by Melinda Ratini, MS, DO, written by WebMD Editorial Contributors on March 15, 2021. [<https://www.webmd.com>]

[6] Britannica, The Editors of Encyclopaedia. "Traditional Chinese medicine". Encyclopedia Britannica, 31 Aug. 2023, [<https://www.britannica.com>]

[7] Yan D, Xu XR, Qian YL, Peng HY, Qian H, Yue BW, Zhao LL, Zhang ZH, Fang ZY. Chinese Patent medicine to treat a 32-year-old man with sinus bradycardia and cardiac sinus arrests: A case report. *Medicine (Baltimore)*. 2019 May;98(19): e15536. doi: 10.1097/MD.00000000000015536. PMID: 31083205; PMCID: PMC6531189.